

# EPIDEMIOLOGY

## Sexual behaviour and risk in Vietnamese men living in metropolitan Sydney

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**Objective:** To describe sexual risk in Vietnamese men who have sex with female sex workers by describing the prevalence of sexual risk behaviours among Vietnamese men living in inner Sydney and comparing this prevalence with national data.

**Method:** Telephone interviews were completed with a random sample of 499 Vietnamese men, selected from the electronic telephone book using a list of common Vietnamese surnames.

**Results:** Of the 761 eligible men contacted, data were obtained from 499 men, giving a response rate of 66%. 20% reported having had sex with a sex worker, including 12% of Vietnamese men who had had sex with a sex worker outside Australia, predominantly in Vietnam. Of the men who had had sex with a sex worker in the past year, 28% had unprotected vaginal or anal sex at their most recent commercial sexual encounter. Ever having paid for sex was significantly associated with a higher lifetime number of sexual partners ( $p < 0.001$ ), history of a sexually transmitted infection ( $p < 0.001$ ) and ever having an HIV test. 1% of respondents reported injecting non-prescription drugs. Less than 1% said they had had sex with another man.

**Conclusion:** Vietnamese men living in Sydney generally show lower levels of sexual and related risk behaviours than other Australian men. However, sex with a sex worker is common among Vietnamese men in Sydney and also when they travel outside Australia. Unprotected vaginal sex with sex workers is surprisingly common. Programmes are needed to deal with vulnerabilities in these areas.

Australia's Vietnamese community has many markers of low socioeconomic status,<sup>1</sup> including poor health. High rates of some mental health problems,<sup>2</sup> male smoking,<sup>3</sup> cervical cancer in women<sup>4–5</sup> and hepatitis B<sup>6</sup> have been reported. Concern has been raised about unsafe injecting, poor access to needle-and-syringe programmes and the high prevalence of hepatitis B and C in Vietnamese injecting drug users in Australia.<sup>7–8</sup> Some reports suggest Vietnamese men having commercial sex with female sex workers in Sydney have low rates of condom usage.<sup>9</sup> A recent report suggests increasing numbers of heterosexual Vietnamese men in Sydney with late presentation of HIV.<sup>10</sup> An Australia-wide surveillance study also noted that being born in Asia was associated with late presentation of HIV infection.<sup>11</sup>

HIV has reached epidemic proportions in Vietnam. The Ministry for Health, Vietnam, estimated that in 2003 there were 215 000 people with HIV in Vietnam, with an estimated 100 people being newly infected every day.<sup>12</sup> Prevalence among injecting drug users was estimated at 32%, and among female sex workers at about 16%. In 2002, 6.5% of patients with sexually transmitted disease had HIV.<sup>13</sup> HIV infection rates in Vietnam are not expected to peak until 2010.<sup>12</sup> Small but appreciable rates of infection are now being seen in Vietnam in antenatal patients and military recruits.<sup>13</sup>

Australia's Vietnamese community is the first large immigrant group to face an HIV epidemic in their homeland. Australia's Vietnam-born people depart on short-term visits overseas at twice the rate of Australian-born residents<sup>14</sup> and most of them travel to Vietnam. Studies have suggested that some Vietnamese participate in injecting drug use<sup>7–8</sup> and sex with sex workers<sup>15–9</sup> while visiting Vietnam.

The Australian Study of Health and Relationships (ASHR) was a population-based telephone study of sexual behaviour conducted in Australia in 2002.<sup>16</sup> In this survey, 19 307 randomly selected people, aged 16–59 years, were interviewed. The overall response rate was 73% (69% for eligible men).

However, interviews were conducted only in English. Many studies have suggested that culture and ethnicity are key predictors of sexual behaviour worldwide.<sup>17–19</sup> Therefore, the study reported in this article aimed to describe the prevalence of sexual risk behaviours among the male Vietnamese population of central Sydney and to compare this prevalence with national data in order to compare sexual risk in Vietnamese men.

### METHODS

This study was approved by the Central Sydney Area Health Service Ethics Review Committee. A list of Vietnamese households in central Sydney was generated from an electronic telephone database,<sup>20</sup> using 100 of the most common traditional Vietnamese surnames. This technique has been successfully used in other studies of communities, including the Vietnamese,<sup>21–23</sup> Arabic and Chinese communities.<sup>24–25</sup> From this sampling frame, 3914 households were randomly selected. Once the household was contacted by telephone, a man aged 16–59 years was randomly selected for inclusion in the study by selecting the eligible man with the most recent past birthday.

The questionnaire used for this study was a shortened version of the questionnaire used for men in the ASHR.<sup>16</sup> A copy of the questionnaire can be obtained from the authors.

Also, a standardised acculturation scale was administered.<sup>26</sup> The acculturation scale has 8-point Likert scale items assessing the domains of use of language and adherence to traditions. Scores were summed to generate a single acculturation score as a continuous variable and then the mean was calculated. A higher numerical score indicated greater acculturation into the Australian English-speaking community.

The questionnaire was translated into Vietnamese, back translated into English by a professional health translator and then pilot tested. Advertisements announcing the study were

**Abbreviations:** ASHR, Australian Study of Health and Relationships; CSA, central Sydney area

placed in local Vietnamese media with the endorsement of the New South Wales Vietnamese Health Professionals' Association.

Interviews were conducted in Vietnamese by six trained bilingual female interviewers over a period of 2 weeks, in the evenings and on weekends. Up to six return calls were made to the identified respondents. Men were invited to participate in the study if they were born in Vietnam or spoke Vietnamese at home, and were aged 16–59 years. Nineteen men who were born in Vietnam but did not speak Vietnamese or English were excluded. Interviews began in November 2002.

Data were weighted by the age distribution of men residing in central Sydney who were born in Vietnam, or spoke Vietnamese at home according to the 2001 census, and the probability of selection (the number of eligible men in the household). The multivariate model examined the association between ever having paid for sex and variables that were significantly associated with having paid for sex. The  $\chi^2$  tests between proportions or t tests between means were used to compare the differences in the study variables from those in the ASHR and the central Sydney Vietnamese surveys.

Methodology of the ASHR has been published previously.<sup>16</sup> Comparison was made using published data.

## RESULTS

Of the 761 men invited to participate, 506 agreed. Seven men were excluded because of inconsistent responses and poor data quality, giving a participation rate of 66%. This is comparable to the participation rate of 69.4%<sup>16</sup> for men in the ASHR. Compared with census 2001 data for Vietnam-born or Vietnamese-speaking men in central Sydney, Vietnamese men in our study were significantly more likely to be  $\geq 40$  years of age ( $p < 0.05$ ; table 1).

### Drug use

Only 5 (1%) Vietnamese men admitted that they had ever injected drugs (table 2). Only 13 (3%) men were drinking in excess of NH&MRC guidelines compared with almost one quarter of men nationally (Smith AMA. Personal Communication 2006).

### Homosexual behaviour

Only four participants reported ever having had sex with men and only one of these men had not had sex with women.

### Lifetime sexual experiences with women

In all, 82 (16%) Vietnamese men had never had sex (table 2). The mean age of these men was 23 years and the median was 21 years. In all, 414 men had had a sexual experience exclusively with a woman and three had experience with both men and women. Of the 414 who had sexual experiences only with women, 407 had had vaginal intercourse.

In all, 18% of the men had  $\geq 10$  lifetime sexual partners compared with 44% of men nationally.<sup>29</sup> The mean number of female lifetime partners (non-commercial) was 10 (median 2, range 0–450).

The median age of first vaginal intercourse was 20 (range 13–45) years; 75% of the men had vaginal intercourse for the first time with a steady partner or wife compared with 56% of men nationally (table 2); and 7% had first had vaginal intercourse with a sex worker compared with 1.4% of men nationally.<sup>29</sup>

Of the 417 who had sexual experiences with women, 342 (83%) men had ever used a condom and 224 (54%) had used a condom in the past 12 months.

### Recent sexual experiences with women

Of the 417 who had sexual experiences with women, the median time since their last sexual encounter was 7 days; 89% of these partners were regular partners (either married, de facto or steady non-live-in partners). These figures are similar to the ASHR data. In the past 4 weeks, respondents had had sex with this partner a mean of 5.8 times (median 4, range 0–30); 93% had had vaginal intercourse with this partner at their most recent sexual encounter, during which 46% had used a condom. In the national study, only 25% of heterosexual men used a condom for their most recent sexual encounter with a woman.<sup>29</sup> Only 2% had had anal sex with this partner at their most recent sexual encounter.

### Commercial sex

In all, 101 (20.3%) men had ever paid for sex (table 3) compared with 15.6% of men from the ASHR cohort.<sup>31</sup> The mean age of first paying for sex was 26 years. As in the ASHR,<sup>31</sup> the distribution of the number of women who men had paid for sex with was highly skewed, varying between 1 and 450 (mean 151, median 10). In all, 96 men supplied information on the location where commercial sex took place; 29 men had paid for sex only in Australia, 28 only overseas and 39 had paid for sex both in Australia and overseas. Of the 67 men who had paid for sex outside Australia, 54 had paid for sex in Vietnam.

Paying for sex was statistically associated with age, being less acculturated, younger age at first sexual encounter, marital status, practising a religion, education, employment status, relationship status with most recent partner, being a hepatitis B carrier or condom use in the past year or ever. When those variables found to be significantly associated with paying for sex in bivariate analyses were included in a multivariate model, three variables were statistically significant: ever having paid for sex was significantly associated with higher lifetime number of sexual partners ( $p < 0.001$ ), history of a sexually transmitted infection ( $p < 0.001$ ) and ever having an HIV test ( $p < 0.04$ ).

In all, 29 (5.8%) men had paid for sex in the past year, compared with 1.9% of men nationally.<sup>31</sup> These men had paid for sex a mean of 8.3 (median 3.4) times in the past year, in varied settings including brothels (80%), massage parlours (28%), small houses (15%), private or independent sex workers (17%), escort workers (5%) and other sex workers such as bar girls overseas (19%). None had paid for sex from a street-based sex worker.

Of the 96 men who supplied data on the most recent time they had paid for sex with women, 92 (96%) had had vaginal sex and 9% anal sex; 75 (81%) men had used a condom for sex but only 71 (77%) for the entire episode of vaginal or anal penetration. This was a much lower rate of condom use than the 99.7% reported by men nationally.<sup>31</sup> Of the 29 men who had paid for sex in the past year, only 21 (72%) had used a condom for the entire episode of vaginal or anal penetration. None of the men had ever paid for sex with a man.

**Table 1** Comparison of age of study sample with the census 2001 data for central Sydney of Vietnam-born or Vietnamese-speaking men

Age group (years)	Study sample (n = 499)	CSA 2001 census (n = 4507)
16–19	7%	8%
20–29	18%	26%
30–39	23%	26%
40–49	35%	29%
50–59	17%*	11%

CSA, central Sydney area.

\* $p < 0.05$

**Table 2** Comparison of sexual health behaviours and risk factors among a sample of Vietnamese and Australian men

	Vietnamese men	Men from the ASHR	p Value
Ever injected drugs	1.0% (5/499)	4.0% <sup>27</sup> (336/9713)	0.004*
Ever had oral or anal sex with a man	0.6% (3/499)	5.9% <sup>28</sup> (574/9723)	<0.001*
Never had sex (vaginal, anal or oral)	16% (82/499)	3.3% <sup>29</sup> (321/9728)	<0.001*
Median age of first vaginal intercourse	20 years (range 13–45) n = 417	17 years <sup>36</sup> n = 9343	
First vaginal intercourse with wife or regular partner	75% (313/417)	56% <sup>36</sup> (5118/9139)	<0.001*
First vaginal intercourse with sex worker	7% (29/417)	1.4% <sup>36</sup> (128/9139)	<0.001*
Ever forced to have sex	1.4% (7/499)	4.8% <sup>36</sup> (450/9373)	<0.001†
≥10 female lifetime sexual partners	18% (75/417)	44% <sup>29</sup> (4280/9728)	<0.001*
Condom use in past year for heterosexual activity	54% (224/417)	42.5% <sup>29</sup> (3573/8407)	<0.001*
Sex with a female sex worker ever	20.3% (101/498)	15.6% <sup>31</sup> (1456/9337)	0.007*
Sex with a female sex worker in the past year	5.8% (29/498)	1.9% <sup>31</sup> (177/9337)	<0.001†
Sex with a female sex worker outside Australia ever	14.4% (67/465)	4.5% <sup>31</sup> (415/9337)	<0.001*

ASHR, Australian Study of Health and Relationships.

\* $\chi^2$  test with Yates correction.

†Fisher's exact test.

## DISCUSSION

This is the first population-based telephone survey of the sexual behaviour of Vietnamese men ever conducted. The response rate was comparable to the ASHR, and to other sexual health surveys conducted in the US<sup>32</sup> and the UK.<sup>33</sup>

Vietnamese men living in Sydney seem to have conservative sexual and injecting drug use behaviours that put them at lower risk of sexually transmitted infections and blood-borne viruses than other Australian men. The rate of these behaviours was much lower than observed in the Australia-wide surveys.<sup>27–28</sup>

Sex with sex workers, however, was more common among Vietnamese men than among Australian men at the initiation of sexual activity, during lifetime and in the past year.<sup>31</sup> Older Vietnamese men were less likely to have paid for sex in contrast with older men nationally.<sup>31</sup> Those men who had paid for sex had notably more lifetime sexual partners, were more likely to have had an HIV test and were more likely to have had a sexually transmitted infection. Safe sex education at the time of testing for an HIV or sexually transmitted infection is an important intervention for these men.

Commercial sex outside Australia was also more frequent among Vietnamese-Australian men than among Australian men,

with most commercial sex occurring in Vietnam. For some, this may have occurred before emigration. However, as the mean time since arrival was 19 years for the group born overseas, it is likely that many of the commercial sexual encounters occurred during visits from Australia to Vietnam. We found low rates of consistent condom use during commercial sex for the most recent commercial sexual encounter, even when that encounter was in the past 12 months.

Telephone surveys usually underestimate the level of drug-injecting behaviour in the community because they exclude the homeless and the imprisoned<sup>34</sup>, and in Australia under-represent the poor.<sup>16</sup> As stigmatised behaviours, injecting drug use and homosexuality are also likely to be under-reported.<sup>35</sup> Vietnamese people in Australia are poorer than the overall population. They are more likely to be unemployed or employed in unskilled occupations.<sup>37</sup>

Our findings suggest that most Vietnamese men are at low risk of HIV and sexually transmitted infections, but Vietnamese men frequenting commercial sex workers in Australia and during travel to Vietnam are at considerable risk. Targeted HIV prevention programmes are needed to consider this issue, focusing on Vietnamese men who attend Vietnamese-speaking doctors for testing and treatment for HIV and sexually transmitted infection.

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**Table 3** Behavioural characteristics of Vietnamese men by sex with sex workers

	Never (n = 312)	Ever (n = 101)	Bivariate	Multivariate p value*
Mean acculturation score†	15.4	13.6	0.008	0.1
Median lifetime number of female sex partners	2	13	0.001	0.001
Mean age at first sexual encounter (years)	21.2	20.0	0.03	0.7
Had sexually transmitted infection ever	6.2%	28%	<0.001‡	0.001
Condom use ever	80%	90%	0.03§	0.1
Ever had HIV test	52%	69%	0.01§	0.04

\*Adjusted for the other variables in the table.

†Mean acculturation score—8-point Likert scale items.

‡Fisher's exact test.

§ $\chi^2$  test with Yates correction.

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